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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,477

04/27/2006

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EXAMINER

PRENTY, MARK V

ART UNIT

PAPER NUMBER

2822

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DELIVERY MODE

12/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/577,477	YAMADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	MARK PRENTY	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18 is/are allowed.
- 6) ☒ Claim(s) 1-5, 12 and 19 is/are rejected.
- 7) ☒ Claim(s) 6-11 and 20-35 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/27/06, 4/12/07, 3/7/08</u> .                                | 6) <input type="checkbox"/> Other: _____                          |

This Office Action is in response to the papers filed on April 27, 2006.

As a preliminary matter, although an interview seems unnecessary, a request for an interview will be granted if the interview is held before the applicant files a response to this Office Action.

Claims 1-5, 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,710,377 to Shimomura together with United States Patent 6,323,063 to Krames et al. (Krames).

As to independent claim 1, Shimomura discloses a light emitting device (see the entire patent, including the Fig. 9 disclosure) configured: so that a device chip 106, having a light emitting layer portion and a main light extraction surface formed on the first main surface thereof, is adhered on the second main surface side thereof to a metal stage 601 while placing an electro-conductive adhesive layer 107 in between, and is covered on the metal stage together with the electro-conductive adhesive layer, using a molding component 111/713 which is composed of a polymer molding material having transparency to emission flux from the light emitting layer portion; and a portion of the molding component comprises a first molding layer 111 covering the device chip and a second molding layer 713 covering the exterior of the first molding layer, wherein the first molding layer is composed of a polymer molding material softer than that composing the second molding layer (note column 4, lines 12-16).

The difference between claim 1 and Shimomura is claim 1's device chip has a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously

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or step-wisely decreases from the first main surface side towards the second main surface side (Shimomura's device chip has a uniform cross-section).

Krames teaches forming a light emitting device chip with angled sides (i.e., with a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously or step-wisely decreases from the first main surface side towards the second main surface side) to increase light extraction (see the entire patent).

It would have been obvious to one skilled in this art to form Shimomura's light emitting device chip 106 with angled sides to increase light extraction as taught by Krames.

Claim 1 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to dependent claim 2, Shimomura's first molding layer 111 is composed of a silicone resin (see column 8, lines 32-34).

Claim 2 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to dependent claim 3, at least a portion of Shimomura's second molding layer 713 is composed of an epoxy resin (see column 8, lines 45-52).

Claim 3 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to independent claim 4, Shimomura discloses a light emitting device (see the entire patent, including the Fig. 9 disclosure) configured: so that a device chip 106,

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having a light emitting layer portion and a main light extraction surface formed on the first main surface thereof, is adhered on the second main surface side thereof to a metal stage 601 while placing an electro-conductive adhesive layer 107 in between, and is covered on the metal stage together with the electro-conductive adhesive layer, using a molding component 111/713 which is composed of a polymer molding material having transparency to emission flux from the light emitting layer portion; and the molding component is configured at least by a polymer molding material 111 composed of a silicone resin (see column 8, lines 32-34) covering the device chip.

The difference between claim 4 and Shimomura is claim 4's device chip has a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously or step-wisely decreases from the first main surface side towards the second main surface side (Shimomura's device chip has a uniform cross-section).

Krames teaches forming a light emitting device chip with angled sides (i.e., with a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously or step-wisely decreases from the first main surface side towards the second main surface side) to increase light extraction (see the entire patent).

It would have been obvious to one skilled in this art to form Shimomura's light emitting device chip 106 with angled sides to increase light extraction as taught by Krames.

Claim 4 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to independent claim 5, Shimomura discloses a light emitting device (see the entire patent, including the Fig. 9 disclosure) configured: so that a device chip 106, having a light emitting layer portion and a main light extraction surface formed on the first main surface thereof, is adhered on the second main surface side thereof to a metal stage 601 while placing an electro-conductive adhesive layer 107 in between, and is covered on the metal stage together with the electro-conductive adhesive layer, using a molding component 111/713 which is composed of a polymer molding material having transparency to emission flux from the light emitting layer portion; and the molding component is configured at least by a polymer molding material 111 composed of a soft material having a type-A durometric hardness specified by JIS:K6253 of 50 or smaller (see column 8, lines 32-34) covering the device chip.

The difference between claim 5 and Shimomura is claim 5's device chip has a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously or step-wisely decreases from the first main surface side towards the second main surface side (Shimomura's device chip has a uniform cross-section).

Krames teaches forming a light emitting device chip with angled sides (i.e., with a section reducing portion formed in at least a portion in the thickness-wise direction thereof, wherein the sectional area normal to the thickness-wise direction continuously

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or step-wisely decreases from the first main surface side towards the second main surface side) to increase light extraction (see the entire patent).

It would have been obvious to one skilled in this art to form Shimomura's light emitting device chip 106 with angled sides to increase light extraction as taught by Krames.

Claim 5 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to dependent claim 12, Krames's device chip is configured so that the side face thereof is formed as an inclined surface, at least in a portion in the thickness-wise direction thereof from the first main surface towards the second main surface, so as to continuously reduce the sectional area.

Claim 12 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

As to dependent claim 19, at least a portion of Shimomura's second molding layer 713 is composed of an epoxy resin (see column 8, lines 45-52).

Claim 19 is thus rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura together with Krames.

Claims 6-11 and 20-35 are objected to as being dependent upon a rejected base claim, but would be allowable over the prior art of record if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-18 are allowable over the prior art of record.

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The prior art of record does not disclose or suggest the allowable light emitting devices as a whole.

Again, although an interview seems unnecessary, a request for an interview will be granted if the interview is held before the applicant files a response to this Action.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.

/MARK PRENTY/

Primary Examiner, Art Unit 2822